New England
BUSINESS REVIEW

Published monthly by the FEDERAL RESERVE BANK of BOSTON

Commuting to Suburban Plants

The flow of automobile commuters in the rush hours might lead an observer to believe that a worker's place of employment bears little relation to where he lives. But a recent survey of plants in suburban Boston indicates that commuting problems still exert a heavy influence on the supply of workers to a firm, and there is a basic tendency for commuting distances of the work force of a newly established plant to contract after the plant has been in operation.

Labor surpluses in one area do not readily flow into tight labor areas. Commuting costs create restraints which new highways may modify but not eliminate. At least this seems to be true of firms located near Route 128, Boston's circumferential highway and other major highways in Greater Boston.

Six years after the first link of Route 128 was opened some 140 firms were estimated to have located on or near the highway, with labor requirements of about 15,000 workers. In the four years since 1957 the number of firms has risen to more than 300 and employment has about doubled.

A sample of 26 firms was visited in the survey. Sixteen were firms which had been included in a similar study in 1957. (See *Business Review*, April, 1958.) Ten were relatively new firms in the area, including some with large and some with small

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labor forces. In order to classify the residences of workers, the 149 cities and towns of the Boston metropolitan area were divided into three bands and eight sectors (see map).

Comparisons of the residences of workers between the two periods of the surveys show an increased proportion living near the plant of their employment. This could result either from workers moving nearer their plant or from a larger proportion of local residents being employed.

Detailed information was available for six plants on the residences of workers over a period of several years. In all six cases there was an increase in the percentage of workers from the sector in which the plant was located. The proportion of workers drawn from the two adjacent sectors also increased in every case but one. The consequent declines in the percentages drawn from other sectors seem to show clearly the tendency of workers to select jobs nearer their home, presumably to reduce their commuting problems. In some cases workers may have moved closer to their employment.

Four out of the six firms had increased proportions of workers in the band in which the plant was located. In one case in which there was a decline the percentage was still very high.

The percentage of workers whose residence is in the local plant area (defined by both sector and band) increased significantly in three firms. The change was negligible in two firms. There was a decline in the percentage in one firm, but a recent cutback had affected primarily shorter service personnel, mostly local residents.

Evidence of worker resistance to increased commuting time is found in the effects of plant relocations on employee losses. Eleven of the plants in the survey had relocated since 1957, and the total number of workers involved in the relocations was 5,246. The average distance from the old plant site to the new was 13.9 miles. The average loss of personnel was 3.7 percent per relocation. For the plants taken as a whole, the average loss in relocation was 3.4 percent.

There was a positive relationship of loss to the distance of the transfer. For distances of less than five miles in the relocation, the average loss per firm was .5 percent. As the distance was greater the losses increased. For distances of five to ten miles the loss was 2.1 percent, 11 to 15 miles, 3.9 percent; and over 15, 5.6 percent.

The record of relocation losses was considerably better than firms reported in the 1957 study. All but two of the 21 relocations in that study, however, were from the core of the Boston metropolitan area to a suburban location. This type of relocation is likely to involve more worker losses than a shift from one suburban location to another. In the present study six of the 11 relocations were from the Boston core.

Female Employees

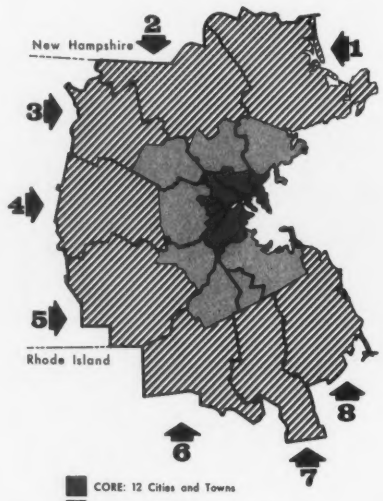
A firm seeking to employ a large proportion of women workers must give greater consideration to the effects of commuting on its labor supply. Women, particularly housewives, tend more than men to limit their employment to locations near their homes. Of all the firms surveyed, about one-third of total employment consisted of women workers.

Among the firms which had relocated, there was a positive relationship between the percentage of women workers in a firm and the percentage of relocation quits. In only one firm with a high percentage of women workers was there a low relocation loss. In this case the distance of the move was less than five miles and the firm was located near public transportation.

To obtain further information on women workers, questionnaires were distributed to the female employees of nine firms. Of the 582 women who replied, 60 percent lived in the same geographic band as the location of the nine firms in which they were employed. Almost 37 percent lived in both the same sector and band in which they were employed. This proportion is low, but was influenced by a firm located on the boundary of a sector.

About one-fourth of the women spend less

BOSTON METROPOLITAN AREA



SOURCE: GREATER BOSTON ECONOMIC STUDY COMMITTEE.

than 15 minutes commuting, and for about 70 percent the time is under 30 minutes. The women were about evenly divided between single and married. The overwhelming proportion commuted by automobile, either alone or in car pools. The length of commuting time was less for housewives, reflecting the tendency to work in areas nearer their residence. Over three-fourths of the housewives spent less than 30 minutes commuting.

Recruitment Problems

The suburban plant encounters particular recruitment problems because of its location. The varied experiences of firms in different locations give evidence that the greater mobility brought by increasing car ownership and new highways has still not made the Greater Boston area a single labor market.

The most frequently mentioned recruitment problem was for female clerical help, especially experienced secretaries. Suburban locations, away from public transportation, impose a particularly difficult commuting problem for women. Some personnel managers doubted, however, whether the "shortage" of well-trained secretaries in the higher pay categories could be attributed entirely to the Route 128 locations and felt that it may be a general problem.

There are also recruitment difficulties for female production workers, and in one case this was the primary cause of a firm's relocation. The shortage of this type of labor was not spread throughout the entire area. Female production labor was considered surplus in some areas, particularly around Lowell and Brockton. Several of the firms along Route 128 attempted to increase their workers from the Lowell area, but this proved generally to be less successful, the greater the distance from Lowell.

Some firms have made special appeals to housewives and older women to enter or re-enter the labor market. The questionnaire circulated among women employees gives evidence that this may have been successful. Out of 498 women who had been hired since 1955, more than one-third had not been employed prior to taking their present job. About one-half of these had been housewives. Almost one-fifth of the women workers in the survey were over 45 years old.

The firms consider the Route 128 location ideal for recruitment of scientific, professional, and engineering personnel. In fact the selection of this location seemed to be dominated by the desire to be close to the supply of this type of labor. This was true for each of the 10 new firms visited, although other factors were obviously relevant also. Several of the new firms were plants of national companies, and the Greater Boston location was chosen after careful consideration of many factors, of which the availability of professionals was high on the list. While recruitment of this personnel remains a problem, there is a general feeling that shortages are nationwide, and if men with the required knowledge are to be found at all, they are most likely to be found in the Greater Boston area.

This article is based on a study, *Changing Labor Supply Characteristics along Route 128*, by Everett J. Burtt, Jr., chairman of the economics department of Boston University. Copies of the study, conducted with the aid of a research grant from the Federal Reserve Bank of Boston, are available upon request from the bank's research department.

For male nonprofessional labor, the market varied by different occupations. Machinists and those with other metal-working skills were reported generally in short supply, although it did not appear that location was a particularly important cause. There were also shortages of electronic technicians reported, but the supply was still considered better than at other locations. Further expansion of this type of personnel was considered dependent upon training programs, not immigration or commuting from other areas.

Few firms surveyed employ unskilled male labor, but recruitment for the firms which do was very difficult. One firm no longer tests applicants for unskilled jobs; it simply hires them.

In some of the subareas, the tightness of the labor market has caused newer firms to pay higher wages to attract workers. The most frequent comment of spokesmen for the newer firms was that their wages were above the going rate. Personnel managers of the old firms typically described wages in their firms as average or below average.

Firms with serious recruitment problems have adopted a variety of policies to meet the situation. Some have established second shifts (generally from 5 to 11 p.m.) and found recruitment of women workers less difficult at that time. Several firms used the "finder's fee," a cash payment to any employee who recruits a new worker. The fee varies with the classification of worker recruited, $25 for clerical workers and $100 for engineers. One smaller firm claims that over a recent period it obtained a fourth of its hires by this method.

Others have attempted to expand the geographic area from which they draw their work force. Several Waltham firms, for instance, have sought to employ workers from the Lowell area. The evidence from this study, however, is that such efforts can have only limited success because of the resistance of workers to commuting, especially if there are alternate job opportunities nearer their homes.

The Cost of Demand Deposits

Commercial banks pay interest on savings and on time deposits. They do not pay interest on demand deposits. Because of this an impression exists that the demand deposits are available to banks for them to lend "free of cost."

Such an impression rests upon the misconception that banks incur little or no expense in accepting and servicing demand deposits.

One reason commercial banks can afford to pay interest on time deposits is because the processing and overhead costs of maintaining them are so low compared with demand deposits. Per dollar of deposits, demand deposit operating expenses are in the range of four times as great as time deposit operating expenses. In the average small-to-medium-sized bank in the First Federal Reserve District even a very modest rate of interest paid on demand deposits would entirely wipe out the operating earnings arising from such deposits. This conclusion is drawn from the 1960 functional cost study sponsored by the Federal Reserve Bank of Boston and participated in by 80 member banks in the deposit range of $3.5 million to $50 million. Average assets of these banks totaled $17 million, and average demand deposits were $10.5 million.

Striking differences exist between demand deposits (checking accounts) and time deposits. The difference between payment and nonpayment of interest has already been cited. A second difference is in their purpose. A time deposit account is an investment made either because the owner is accumulating funds for some specific use or because he is depositing a sum of money pending a more permanent investment. In either case he places the funds at interest in order to have some return on his money.

Indeed, though the depositor may not realize it, as one of the considerations for receiving interest, he gives to a savings bank or to a commercial bank the option of requiring advance notice of withdrawal. In practice this option is almost invariably waived. Nevertheless the fact that it exists is as essential a distinction of a savings account as is the payment of interest. In addition, a withdrawal from a savings account usually involves a visit to the bank.

By contrast, a checking account gives the depositor the advantage of being able to keep his money in a safe place with the unqualified right to withdraw it at will. This he can do without ever leaving his desk.

In addition to holding this option to withdraw his money upon demand, the depositor also gains the opportunity, through the use of checks, of transferring his money by mail in any amount and for any distance. The requirements of paid-in capital and surplus, insurance coverage by the Federal Deposit Insurance Corporation, and the various examination and supervisory policies, are all directed at insuring that the obligation to meet withdrawal on demand is honored.

The alternatives to the use of checks for transferring money would be to make payments, hand-to-hand, using currency; to forward the money by government money order, by registered mail, or by a registered bank check; by forwarding currency by ordinary mail which is certainly not recommended; or finally, in large transactions, by the use of armed guards or armored trucks.

The scope of check writing is best indicated by the fact that annually 14 billion pieces of paper representing $2½ trillion flow through the banking system. It is commonly estimated that 90 percent of the dollar volume of money transfers is by check. Conservative estimates suggest that by 1970 the number of checks will have grown to 22 billion annually.

A third difference between demand deposits and saving deposits is in the expense of handling. The 80 banks in the cost study had an average of nine officers and 46 employees. But of the employees, 10 commercial tellers, four transit-proof clerks and 12 bookkeepers were required to handle the demand deposits. Dollarwise, average total operating expenses (excluding interest paid) for the 80 banks were $460,328; yet of this amount expenses of the demand deposit function were $242,563, of which a third constituted employees' salaries alone.

By contrast these same banks averaged $4.3 million in time and savings deposits which required the services of 2.8 employees. In other words the demand deposit function averaged about 2½ times the dollar volume of the time deposit function but required the services of nine times as many employees.

Conventional cost accounting methods suggest that the cost to a commercial bank of savings and other time deposits (all hereafter referred to as time deposits) comprises the processing and overhead costs of the time deposit function plus interest paid. By the same reasoning the cost to a

The data in this article are largely drawn from a study of 1960 functional income and expenses sponsored by the Federal Reserve Bank of Boston and participated in by 80 First District member banks. Their deposits ranged in size from $3.5 million to $50 million. A summary of the methods used in collecting and analyzing the data is available upon request from the research department of the Federal Reserve Bank of Boston.

bank of its demand deposits is the processing and overhead costs of that function less a deduction for any activity charges which have been collected.

In the time deposit function, controls must be maintained and interest must be computed but, relatively speaking, these are neither costly nor complicated operations. A typical transaction in a savings account entails a simple debit or credit, usually made while the depositor is at the teller's window.

Not so with the demand deposits. The American Bankers Association estimates that each home debit (a check charged against a customer's account) involves processing in six different operations. Similarly, each deposit involves four phases of processing; each transit item (a check drawn on a different bank) involves two. Further, each operation requires a system of controls to insure that each check and deposit is handled speedily and accurately.

The relative simplicity of the time deposit function, coupled with the smaller number of transactions, is apparent from the fact that each employee handled an average annual volume of $1,536,000. By contrast, the demand deposit function employees handled an average annual volume of $405,000.

It is obvious that the service which the banks rendered in connection with handling demand deposits was costly. It is logical, therefore, to ask if activity charges were not sufficient to compensate banks fully for the service.

On the average the activity charges of the 80 banks were only 35 percent of the total expenses involved in handling demand deposits. This was just about sufficient to pay the salaries of the 26 people required to process the annual volume of checks and deposits.

The other 65 percent was unrecovered expense which the banks absorbed as the price they paid for acquiring the demand deposits. This includes such direct costs as printing, stationery, postage, equipment, prorated officers' salaries, fringe benefits, and FDIC insurance, and prorated indirect overhead costs including light, heat, rent or occupancy, telephone and the like. Thus, the gross expense of handling demand deposits was 2.31 percent of demand deposits and the net unrecovered expense after allowing a credit for activity charges was 1.50 percent.

A fourth difference between time and demand deposits is their rate of turnover and the consequent necessity to vary liquidity policy for each source of funds. Savings deposits tend to be stable, demand deposits tend to be volatile. In the pool-of-funds concept used in this study 5 percent of time deposits were held in required reserves and 3 percent were held as working cash. The balance of the time deposits was considered to be invested in the portfolio. The remaining cash and the remaining portfolio were attributed to demand deposits. On this basis cash reserves for the 80 banks averaged 8 percent for time deposits and 25 percent for demand deposits.

In this pool-of-funds concept the rate of portfolio earnings attributed to time and demand deposits would be identical. However, because $92 out of every $100 of time deposits could be invested to generate income and only $75 of each $100 of demand deposits could be so invested, the time deposits were able to out-earn demand deposits by 3.76 percent to 3.03 percent.

Based on each $1,000 of demand deposits, gross expenses on the average were $23.07. When this was deducted from the average gross income of $38.40 it left net earnings of $15.33. A deduction of $6.73 for federal taxes left net current operating earnings of $8.60 after federal and before state taxes. On a percentage basis this was 0.86 percent of demand deposits. This was before payment of dividends to stockholders.

Of course it does not follow that, because the typical demand deposit account yields a small return, this is true of all accounts. Quite the contrary. Large accounts with low deposit turnover can be very profitable. In the postwar period, however, many of the financial officers of large corporations and large municipalities have pulled down their average demand deposits by investing their idle balances in Government securities. This action has increased the turnover of demand deposits and has had a depressing influence on the over-all profitability of the demand deposit function in commercial banks.

The statement is sometimes made that existing legislation forbidding payment of interest on demand deposits should be repealed. Were banks in this study to pay interest on demand deposits they would have to increase service charges proportionately or experience a drop in profits. If interest were set at only 0.86 percent, an added expense at that rate would equal the entire average net operating earnings arising from the demand deposits for the 80 banks in this 1960 study.

A staff research report, *Residual Oil Import Restrictions,* has been written by Michael Rieber, assistant industrial economist of the Federal Reserve Bank of Boston. The study concerns the impact of restrictions on East Coast industrial fuel consumers and the coal industry. Copies of the report are available upon request from the bank's research department.

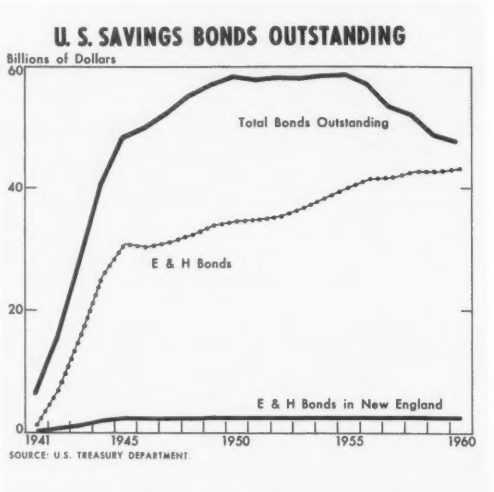
Anniversary of the E Bond

In 1935 the U.S. Treasury began the sale of savings bonds to encourage thrift. Six years later it revamped the program to prepare for defense financing and launched the E Bond, which has served as a defense bond, a war bond, and now a savings bond.

This year is the 20th anniversary of the E Bond, the first one of which was sold to President Franklin D. Roosevelt in May 1941 by Secretary of the Treasury Henry Morgenthau, Jr. The purpose of the original E Bond was to finance defense preparations yet record holdings of these bonds were set long after the war had ended. Holdings of E Bonds and the companion H Bonds (inaugurated in 1952) were at a record $43.6 billion on the anniversary day, May 1, 1961. Although total holdings of savings bonds have declined, holdings of these two series, the only ones now sold, continue to mount.

Yearly sales of savings bonds have averaged close to $5 billion since the end of World War II. The largest sales volume for any one year was $12 billion in the peak war year of 1944. The Treasury has sold more than $123 billion of the E and H Bonds, including accrued interest, and about $79 billion has been redeemed.

At the beginning of the year New Englanders held about $2.5 billion of E and H Bonds. Per capita holdings were $252, compared to the national average of $243. Total sales in New England since the start of the program have exceeded $5.8 billion. Last year Vermont exceeded its quota of savings bond sales by a greater percentage than any other state.

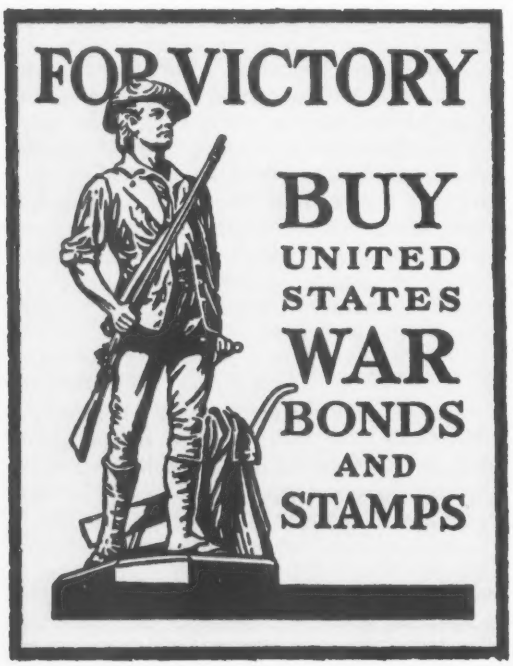


The first E Bond paid interest of 2.90 percent if held to maturity of ten years. The rate was increased to 3 percent in 1952, 3¼ percent in 1957, and 3¾ percent in 1959. Maturity has been shortened to 7¾ years.

Interest rates for E Bonds are figured on a rising scale, with larger interest earnings as the bond grows older. Interest is not paid regularly to the bond holder, but accrues through the increased redemption value of the bond. Federal income tax need not be paid on the earnings until the bond is cashed in.

The distinguishing features of savings bonds are stability in value and a guaranteed interest rate. They are designed primarily for individuals who do not normally purchase marketable debt, and in recent years the program has been modified to help achieve this purpose. The savings bonds eligible for purchase by financial institutions were discontinued in 1957 when interest rates were raised. Also, the volume of savings bonds which any individual could purchase in one year was reduced to $10,000.

In addition to their safety and liquidity, convenience of purchase has helped to make the E Bond the most widely distributed security in the history of finance. School children unable to buy a whole bond can buy savings stamps and cumulate them for the purpose of a bond. Bonds can be bought "over the counter" from some 23,000 banks and other financial institutions, and some 8,000,000 workers buy bonds through payroll savings plans.



Summer Season Successful

As New England's summer vacation lodging proprietors go about closing their establishments this year, there is an obvious reluctance to end the season. The reason for this feeling is the possible establishment of a new record in guest occupancy. Lodging hosts entertained more visitors than ever before, exceeding slightly the record set back in 1957, if September business, for which data are not available, at least equaled that a year ago.

Good business was not confined to the lodging places. All major types of tourist attractions had a better summer than in 1960. These gains undoubtedly mean that the many New England business establishments serving tourists must also have had a busy summer. This group would include many types of business, such as drug stores, gas stations, laundries, plumbers, contractors, grocery stores, gift shops, farmers, restaurants and news stores among others.

The season started on somewhat of a sour note. Rainy cool weather in May, coupled with the fact Memorial Day fell on a Tuesday and did not extend a weekend, caused occupancy of the region's lodging places to fall 10 percent below the record set a year ago. May 1960, however, had the benefit of a long Memorial Day weekend, the traditional start of summer vacation business.

Although June's somewhat cool weather didn't send people rushing to the beaches and mountains, enough tourists felt the need for a change to push guest counts 2 percent higher than a year earlier. Growing convention business was a plus factor for some lodging places.

Vacation business trailed expectations in early July as cool damp weather combined with a Tuesday date for Independence Day. Activity picked up markedly in the latter half of the month as the weather improved. Gains made then were large enough to overcome the loss in early July and to nudge the month's total slightly above the comparable 1960 figures.

August witnessed a continuation of the conditions of the latter half of July, and guest occupancy for the month was 3 percent larger than in August 1960 and nearly equal to the record number of August 1957. Nearly all major types of lodgings had more business than a year ago; only cabin colonies and restaurants with overnight guests failed to show gains.

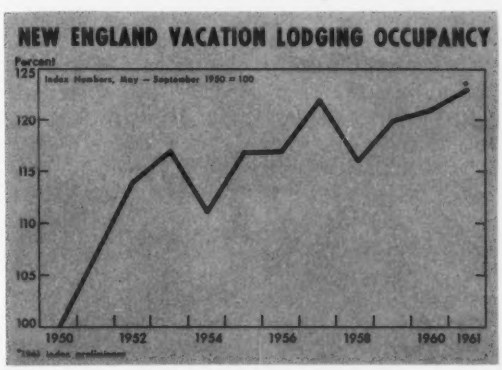
August's guest count brought the total for the season to date 2 percentage points higher than that achieved last year and within striking distance of the all time record set in 1957. If September business only equals that a year ago, the seasonal total will exceed that of the record season by a very small margin. Any gain in September will serve to increase the margin, of course, while a loss of up to 2 percent from September 1960 can be sustained and the record still be broken.

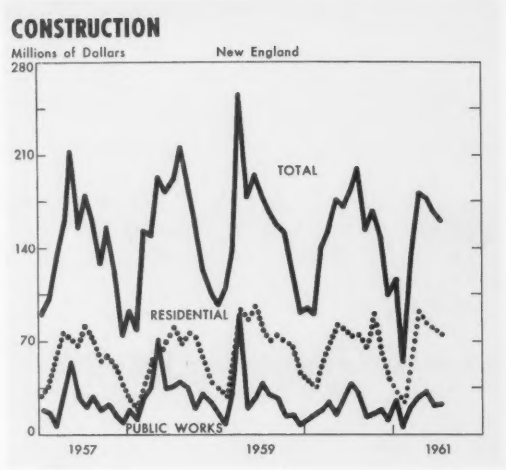
Although New England as a whole may well set a record, the two southern states have not had as good a season as their northern neighbors. Neither Rhode Island nor Connecticut had as good a summer as they did last year, with no month having as much business as the comparable 1960 one. All the other states achieved gains over year-earlier totals. In all states but New Hampshire the hotel and inn group fared better than did the guest house group.

Tourist Attractions

Another indication of increased tourist activity in New England this year is the gain in attendance at the wide variety of tourist attractions in this region. All types of attractions reported gains over 1960 attendance for the three-month period of June, July and August. Increases ranged from 3 percent for summer theatres, parks and forests, and wildlife preserves and animal farms to 10 percent for museums and galleries and 12 percent for entertainment and amusement parks. For all types combined, a gain of 4 percent was achieved. The monthly pattern was similar to that of the lodging places with June attendance up 4 percent, July's even with a year ago and August's up 7 percent. All six states had attendance gains, with much of Rhode Island's gain due to a substantial increase in use of that state's parks from the polio-reduced total of 1960 and, to a lesser extent, to greater attendance at the Jazz Festival.

All in all, although the 1961 season did not boom with great gains from year-ago levels, the gains achieved were large enough to push the season into the record-breaking class.





MANUFACTURING INDEXES (seasonally adjusted)	MASSACHUSETTS (1950–52 = 100)			NEW ENGLAND (1950–52 = 100)			UNITED STATES (1957 = 100)		
	Aug. '61	July '61	Aug. '60	Aug. '61	July '61	Aug. '60	Aug. '61	July '61	Aug. '60
All Manufacturing	119	122r	125	124	123r	123r	113	112r	108r
Primary Metals	105	110	95	99	97r	91r	97	95r	83r
Textiles	44	44	45	66	66	65	n.a.	115	111
Shoes and Leather	120	119r	128	123	122r	128	n.a.	n.a.	103
Paper	110	112	109	126	128	124	n.a.	117	112

	NEW ENGLAND	Percent Change from:		UNITED STATES	Percent Change from:	
	Aug. '61	July '61	Aug. '60	Aug. '61	July '61	Aug. '60
BANKING AND CREDIT						
Commercial and Industrial Loans ($ millions) (Weekly Reporting Member Banks)	1,483	+ 1	+ 2	31,485	0	+ 1
Deposits ($ millions) (Weekly Reporting Member Banks)	4,605	0	+ 5	117,044	0	+ 8
Check Payments ($ millions) (Selected Cities)	9,615	+ 2	+ 5	255,536	+ 3	+ 6
Consumer Installment Credit Outstanding (index, seas. adj. 1950–52 = 100)	262.7	0	+ 2	286.8	0	+ 1
TRADE						
Department Store Sales (index, seas. adj. 1947–49 = 100)	132	− 2	+ 7	150	− 1	+ 4
Department Store Stocks (index, seas. adj. 1947–49 = 100)	157	+ 1	+ 3	169	+ 2	0
EMPLOYMENT, PRICES, MAN-HOURS, & EARNINGS						
Nonagricultural Employment (thousands)	3,763	+ 1	0	53,400	+ 1	0
Insured Unemployment (thousands) (excl. R. R. and temporary programs)	130	−12	+ 7	1,812	− 8	+ 7
Consumer Prices (index, 1947–49 = 100)	130.9 (Mass.)	0	+ 2	128.0	0	+ 1
Production-Worker Man-Hours (index, 1950 = 100)	85.9	+ 2	− 3	96.9	+ 2	− 1
Weekly Earnings in Manufacturing ($)	85.97 (Mass.)	0	+ 3	93.83	0	+ 4
OTHER INDICATORS						
Construction Contract Awards ($ thous.) (3-mos. moving averages June, July, August)						
Total	179,464	+ 7	− 3	3,543,369	0	+ 3
Residential	78,435	− 1	+ 4	1,546,669	+ 1	+ 9
Public Works	27,413	+10	−15	674,614	+ 4	+ 1
Electrical Energy Production (index, seas. adj. 1947–49 = 100)	236	+ 1	+ 7	289	0	+ 5
Business Failures (number)	62	+13	+ 7	1,604	+26	+22
New Business Incorporations (number)	900	+ 3	+ 9	15,079	+ 4	0

n.a. = not available

r = revised